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**Patent and Trademark Office**

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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.
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09/619,669    07/19/00    MORISHITA    Y    DP-652 US

021254  
MCGINN & GIBB, PLLC  
8321 OLD COURTHOUSE ROAD  
SUITE 200  
VIENNA VA 22182-3817

MM91/0829

EXAMINER

TRAN, T

ART UNIT    PAPER NUMBER

2814

DATE MAILED: 08/29/01

**Please find below and/or attached an Office communication concerning this application or proceeding.**

**Commissioner of Patents and Trademarks**

# Office Action Summary

Application No.

09/619,669

Applicant(s)

MORISHITA, YASUYUKI

Examiner

THANH V TRAN

Art Unit

2814

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136 (a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 19 July 2000.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-20 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claims \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are objected to by the Examiner.
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved.
- 12) ☐ The oath or declaration is objected to by the Examiner.

## Priority under 35 U.S.C. § 119

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).

## Attachment(s)

- 15) ☒ Notice of References Cited (PTO-892)
- 16) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 17) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 3.
- 18) ☐ Interview Summary (PTO-413) Paper No(s) \_\_\_\_\_.
- 19) ☐ Notice of Informal Patent Application (PTO-152)
- 20) ☐ Other: \_\_\_\_\_.

## **DETAILED ACTION**

### ***Claim Rejections - 35 USC § 112***

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 1-20 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. In claim 1 ( lines 9-10), the phrase " a second diffusion layer of the second conduction type connected to the electrode wiring kept," is unclear.

### ***Claim Rejections - 35 USC § 102***

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

Claim 1-20 are rejected under 35 U.S.C. 102(e) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Horiguchi ( U.S patent # 5,932,914).

Referring to figures 1 and 2, Horiguchi discloses an input/output protection device for a semiconductor integrated circuit including a substrate 101 of the first conductive type ( p type), an internal circuit, an input/output terminal, electrode wiring, and signal wiring, comprising:

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a first diffusion layer 102b fabricated in a region of the first conduction type of the semiconductor substrate 101, the layer having a second conduction type ( n type) opposite to the first conduction type ( p type) and being connected to the input/output terminal ( column 4, lines 36-37),

a second diffusion layer 102a of the second conduction type ( n type) connected to the electrode wiring kept, the electrode wiring being at a predetermined potential (column 4, lines 28-31),

a third diffusion layer 112 of the second conduction type ( n type) fabricated at a bottom of the second diffusion layer 102a, the third diffusion layer being connected to the second diffusion layer 102a,

the first diffusion layer 102b being circularly enclosed with the third diffusion layer 112 ( figure 1),

the first conduction type of the semiconductor including a fourth diffusion layer 103 having impurity concentration (  $p^+$  ) higher than that of the semiconductor substrate ( p ),

the third diffusion layer 112 having a depth more than that of the fourth diffusion layer 103 ( figure 2),

a lateral, bipolar transistor including the first diffusion layer as a collector, the second and third diffusion layer as an emitter, and the region of the first conduction type or the fourth diffusion layer as a base being put to operation,

the first and the second diffusion layer being isolated from each other by a device separating isolation layer 104 on a surface of the semiconductor,

the first and the second diffusion layer being manufactured with a gate electrode 105 disposed on a surface of the semiconductor substrate.

the device separating isolation layer or the gate electrode being fabricated in a circular shape ( column 3, lines 20-23),

the gate electrode being connected to the signal wiring of the internal circuit of the semiconductor integrated circuit, the gate electrode being fixed to a predetermined potential, and the potential being a ground potential ( column 4, lines 59-61).

3. Referring to claim 12, Horiguchi does not show the first conduction type being a n type and the second conduction type being a p type. However, it would be obvious to one having ordinary skill in the art of the time the invention was made to form the first conduction type being a n type and the second conduction type being a p type in the device of Horiguchi because the device will function the same as long as the predetermined potential is connected to a potential of a power source.

### **Conclusion**

4. Papers related to this application may be submitted directly to Art Unit 2814 by facsimile transmission. Papers should be fax to Art Unit 2814 via the Art Unit 2814 Fax Center located in Crystal Plaza 4, room 3C23. The faxing of such papers must conform with the notice published in the official Gazette, 1096 OG 30( 15 November 1989). The Art Unit 2814 Fax Center number is (703)308-7722 or -7724. The Art Unit 2824 Fax Center is to be used only for papers related to Art Unit 2814 applications.

5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to THANH V TRAN whose telephone number is 703-

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306-0208. The examiner can normally be reached on 8:00AM-5:30PM Monday through Friday or by e-mail via Thanh.Tran1@uspto.gov.


6. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Olik Chaudhuri can be reached on 703-306 2794. The fax phone numbers for the organization where this application or proceeding is assigned are 703 -308-7722 for regular communications and 703 -305-3431 for After Final communications.

7. Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0956.

8. The following list is the Examiner's field of search for the present Office Action:

Field of Search	Date
<b>U.S Class/Subclass(es):</b> 257/356,355,360,358,363	08/20/01
<b>Other Documentation:</b>	
<b>Electronic Database(s):</b> East ( USPAT)	08/20/01

Thanh Tran  
August 23, 2001

  
OLIK CHAUDHURI  
SUPERVISORY PATENT EXAMINER  
TECHNOLOGY CENTER 2800